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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/961,126-Conf. #4200
	Filing Date	September 21, 2001
	First Named Inventor	Stephen R. Schmidt
	Art Unit	1733
	Examiner Name	Gladys Josefina Piazza Corcoran
Total Number of Pages in This Submission	Attorney Docket Number	28748/37575

ENCLOSURES (Check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	MARSHALL, GERSTEIN & BORUN LLP		
Signature			
Printed name	Thomas A. Miller		
Date	July 13, 2005	Reg. No.	40,091

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Dated: July 13, 2005	Signature:  Thomas A. Miller)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: July 13, 2005 Signature: *Thomas A. Miller*

(Thomas A. Miller)

Docket No.: 28748/37575  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:

Stephen R. Schmidt

Application No.: 09/961,126

Confirmation No.: 4200

Filed: September 21, 2001

Art Unit: 1733

For: APPARATUS AND METHOD FOR  
MANUFACTURING CORRUGATED  
BOARDS

Examiner: Gladys Josefina Piazza  
Corcoran

REPLY BRIEF

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the provisions of 37 C.F.R. § 41.41, this brief is filed within two months of the Examiner's Answer mailed on May 13, 2005 in connection with the above-referenced application. Appellants ask that the Board consider the following brief comments as well.

The critical issue before the Board is whether the current art fairly discloses or suggests the claimed invention of the independent claim. Appellant submits it does not. Not to belabor points made in the Appeal Brief and subsequent answer, but Appellants wish to be clear and thus summarize the application as follows:

1. The current art shows both the single facer and the double facer bonds are established by applying a starch based water slurry to the flutes tips of the medium. The medium and the starch are then brought into contact with a liner paper; the combination is heated; and a bond is generated.

2. As noted in our application, there are two “recent” changes in the corrugated paper industry:

- a. Compressed, high density “high ring crush” liner papers are being used. These stronger papers are used in lighter basis weights to reduce the fiber costs of packaging. These papers conduct heat much more rapidly than traditional papers. That is to say, they are more sensitive to heat addition.
- b. Modern and upgraded machines have greater heating capacity in order to allow these machines to run faster. A good portion of these extra heat sources continues to be in contact with the paper when the machine needs to be slowed. As a consequence, the paper is overheated. Overheating is especially damaging to high ring crush paper.
- c. To counteract this excess application of heat, it is a common practice to increase the application of the starch based water slurry to the flutes tips.
- d. The inventor saw that this extra slurry was being applied, although it was not required for proper glue bond (Good bond is obtained at high speeds with less glue).
- e. This extra glue results in a quality defect known as “washboarding” which is a deformation of the surface of the final corrugated sheet. Among other problems, washboarding prevents good printing.
- f. The extra added starch is wasted.

The proposed invention on the other hand is a process change on the corrugator whereby water only (not extra water based starch mix slurry) is added to quench the extra heat. This water must be applied before the starch is applied.

In order to add this extra water, a new device must be added to the corrugator before each glue applicator. Water may be applied by a variety of means as noted. Further, a

control system must be added to decide when the extra water is needed based on the papers being used and the machine speed.

The result of our proposed system should be a reduced starch consumption and reduced washboarding.

The process change of adding water, as needed, prior to the existing starch application is novel and is not used or known in the current art.

Moreover, these elements are specified in the claims and are not disclosed or suggested in the prior art. In fact, the art is silent with respect to this problem, much less the solution. The Wallick references first add resin and then add adhesive. Swift does the same. Westphal and Miller are cited only for their sprayer disclosure and are thus immaterial to this point. Accordingly, the question becomes whether Wallick and Swift fairly disclose or suggest the above. The answer is no.

The examiner even admits as much by arguing not that the resin applicators of Wallick and Swift disclose those elements, but rather that they “are capable of” applying only water and then only starch. However, “capable of” is not the same as actually disclosing. The importance of this difference is then dismissed by citing MPEP 2115 and arguing “the material worked upon does not further limit apparatus claims.” Appellants agree MPEP 2115 states this but, more importantly, that it is not on point. The material worked upon here is corrugated cardboard, whereas the added water supply device that first applies water before the standard starch applicator is used. The starch supply device that then applies starch is an actual structural claim element and are fully independent of the corrugated cardboard being worked upon. If the examiner had found another reference or combination that showed a water supply device that first applies water only to flute tips, and then a starch supply device that applies starch only to the same flute tips, but did so in a different setting on a different medium she may be correct, but that is not the case. Here there are structural differences in the claimed apparatus, regardless of the medium being worked. Those differences are that the claim specifically calls for a water supply device that applies water only to the flute crests, and a starch supply device that then applies starch to the same flute crests. These structural differences are independent of the medium being worked.

Having established that the water supply device and starch supply device are in fact structural limitations of the claims, the Examiner's argument that "any indication of a problem in the prior art and a solution by Appellant's invention are not addressed and need not be addressed because none of the arguments relate to any of the claim limitations" must also fail. As these elements are firmly in the claim, not only is the use of MPEP 2115 for anticipation purposes misplaced, but so also is the avoidance of the established case law requiring analysis of the above-identified problem and solution for non-obviousness purposes.

Appellant also wish to remind the Board that the corresponding European application was recently granted by the European Patent Office.

Finally, two of the points the Examiner addresses in length in her answer relate to the subsidiary issues of whether a sprayer is novel and non-obvious in connection with such a machine, and whether water and starch combine to form an adhesive. Appellants do not wish to belabor these points as we obviously disagree with the Examiner and leave it to the Board to decide based on our respective prior submissions. Suffice it to say the sprayer element is in a dependent claim, and the combination of water and starch forming an adhesive is well-known in the art.

Appellants accordingly ask that the Board accurately apply the law the Examiner has not and reverse her anticipation and non-obviousness rejections. Should any fees be required the office is authorized to charge our deposit account 13-2855.

Dated: July 13, 2005

Respectfully submitted,

By 

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